The nature of the binding site for phenothiazines and iminodibenzyl compounds is assumed to be hydrophobic, (Jähnchen & others, 1969). The affinity of binding, therefore, ought to be related to the degree of hydrophobicity of the molecule as measured by the partition coefficient. On the whole, the results presented appear to substantiate this assumption. The position of desipramine, however, is anomalous. For chlorimipramine $k = 0{\cdot}73 \times 10^5$ and the log partition coefficient (lpc) (Glasser & Krieglestein, 1970) = 3·32; for imipramine $k = 0{\cdot}24 \times 10^5$ and lpc = 2·51 while for desipramine $k = 0{\cdot}7 \times 10^5$ and lpc = 1·48.

Desipramine has a far greater affinity than its partition coefficient would suggest. This would indicate that other factors are involved in determining the affinity of binding of these compounds, possibly ionic since desipramine is much more basic than any of the other compounds (desipramine pka = 10·2, imipramine pka = 9·5, Green, 1967).

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The antipseudomonal activity of contact lens solutions

The antimicrobial effectiveness of contact lens solutions have been reported (Norton, Davies & others 1974; McBride & Mackie, 1974). My own evaluations of the antibacterial efficiency of these solutions support the proposition made by the above workers that suitable standards should be applied to contact lens solutions. An important part of any standards should include standard methods of evaluation. Uniform methods for the preparation of test inocula of microorganisms need to be included because when the findings of Norton & others (1974) using *Pseudomonas aeruginosa* NCTC 6750 are compared (see Table 1) with a similar evaluation using the same test organism and the same contact lens solutions, but using the technique of Richards & McBride (1971), several of the findings are markedly different. The difference in the size of the inocula 10^6 organisms ml^{-1} used by Norton & others compared with 5×10^6 organisms ml^{-1} in this present investigation is not sufficient to account for the difference in the results reported. Neither does it appear that the differences in results can arise from changes occuring in the commercially prepared solutions during storage, since the results obtained were similar for the commercial preparations and for the equivalent freshly prepared preparations.

Norton & others (1974) washed the cell suspensions, used as sources of inocula, with a minimal salts medium. With *P. aeruginosa* this could have affected the subsequent resistance of the cells to chemical inactivation and their results would seem

Table 1. *Sterilization times for contact lens solutions inoculated with* Pseudomonas aeruginosa *NCTC 6750.*

Code letter as per Norton & others, 1974		Formulation	Time to sterilize in minutes: Norton & others, 1974 10^6 cells ml^{-1}	Time to sterilize in minutes: Richards, 5×10^6 cells ml^{-1}	pH
B	(Commercial)	Bk 0·004% + Chex 0·006% + EDTA 0·1%	<15	<15	(7·8)
	(Laboratory)		—	<15	(5·0)
GG	(Commercial)	Bk 0·004%	<15	>240	(6·8)
	(Laboratory)		—	>240	(8·7)
H	(Commercial)	PMN 0·001% + Bk 0·004%	<15	210–240	(7·1)
	(Laboratory)		—	>240	(7·2)
L	(Commercial)	Bk 0·004%+Chex 0·006% + EDTA 0·1%	<15	15–30	(6·9)
	(Laboratory)		—	<15	(5·0)
P	(Commercial)	Bk 0·004%	60–120	>240	(5·0)
	(Laboratory)		—	>240	(8·7)
No Code	(Commercial)	Bk 0·004% + EDTA 0·1%	—	>240	(7·0)
	(Laboratory)		<15	>240	(4·8)

Bk = Benzalkonium chloride; Chex = Chlorhexidine gluconate; EDTA = Ethylenediamine tetra-acetic acid; PMN = Phenylmercuric nitrate.

to indicate that this did in fact occur. This phenomenon has been reported by Brown (1968) and it would therefore appear to be important that broth cultures or broth suspensions of *P. aeruginosa* should be used in tests to determine the anti-pseudomonal activity of antibacterial solutions.

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